INDEX

Acer saccharinum, radial increment and flooding, 122
Age categories, in Desmognathus, 204-208
Agelaius, ecology of social systems, 285-312
Appalachian Mountains, salamander studies, 189-220
Arctic and alpine populations, *Oxyria digyna,* 1-29

Balanus balanoides
  competition in, 61-104
  mortality in, 69-83
  settlement by, 64-69
Billings, W. D., article, 1-29
Biomass, of soil arthropods, 224-225
Blackbird, ecology of social systems, 285-312
Breeding cycles, in Desmognathus, 208
Breeding, in blackbird populations, 289-292, 295-298

Chromosome number, *Oxyria digyna,* 11
Climate
  Gough Island, 339
  Indiana, 143-147
  S.E. Michigan, 34
Clutch size, in blackbirds, 294-295, 300-301
Colony size, limitation of, in blackbirds, 301-302
Community, old field, role of soil arthropods in, 221-238
Connell, J. H., article, 61-104
Continuum index and stream flooding susceptibility, 231
Controlled environment, effects, *Oxyria digyna*
  carbohydrate and nitrogen contents, 23
  dormancy, 16
  growth, 12
  phenology, 13
  inflorescence production, 16
Cooper, A. W., article, 31-59
Courtship
  in black-capped vireo, 323
  in Desmognathus, 197-200
Crowding effects, in barnacles, 75-82

Desmognathus, distribution, life history, and population dynamics, 189-220
Distribution
  black-capped vireo, 313-315
  of Desmognathus, in Virginia, 193-196
  of litter, on forest floor, 274-276
  of species, in oyster beds, 249-257

Egg laying, in Desmognathus, 202-204
Energetics, role of soil arthropods in, 221-238
Energy budgets, in blackbird populations, 302-306
Engelmann, M. D., article, 221-238
Environment, Indiana rivers
  and vegetation, 105-156
  soil properties, 111
  stream dynamics, 107
  watershed history, 106
Evolution, of blackbird social systems, 308-310
Evolutionary trends, in Desmognathus, 217-218

Fauna, of oyster beds, 239-266
Feeding behavior, in blackbirds, 294-295, 301
Feeding rate, in Thais, 89-91
Fern bush, Gough Island, 343
Flooding, effects of, 122-126
  damage, 123-125
  radial increment, 122
  seedlings, 123
Flood plain habitats, 113-122
Forest floor, habitat analysis of, 267-283

Geology, Gough Island, 339
Gough Island
  climate, 339
  geology, 339
  soils, 339
  topography, 339
  vascular flora, 366
  vegetation, 337-367
Graber, J. W., article, 313-336

Habitat analysis, of forest floor, 267-283
Habitat, black-capped vireo, 315-321
Heath, wet, Gough Island, 350
Heatwole, H., article, 267-283
Hurricanes, effects of, on oyster bed fauna, 253-255

Incubation, black-capped vireo, 325

Life forms and microclimate, 31-59
Life history
  of black-capped vireo, 322-333
  of Desmognathus, in Virginia, 196-204
Life tables, in Desmognathus, 215-216
Light, adaptation to, 25
Lindsey, A. A., article, 105-156
Litter, classification of, on forest floor, 267-283

Mating systems, in blackbirds, evolution of, 306-308
Michigan, southeastern, life-forms and microclimate, 31-59
Microclimate and life forms, 31-59
Microclimate, S.E. Michigan
  air temperature, 39
  evaporation, 43
  soil moisture, 46
  soil temperature, 44
  wind, 43
Migration, black-capped vireo, 333
Mooney, H. A., article, 1-29
Mortality, in barnacles, 69-83
Moorland, Gough Island, 353

Nesting, black-capped vireo, 331
Nesting success, in blackbirds, 294-295, 300-301

Orians, G. H., article, 285-312
Organ, J. A., article, 189-220
Oxygen consumption, by soil arthropods, 225-226
Oxyria digyna, physiological ecology of, 1-29
  arctic and alpine
    habitats, 5-8
    populations, 1-29
  germination, 11-12
  growth and development, 12-16
  rhizome formation, 25
Oxyria digyna, tolerance, 24
  adaptation to light, 25
  adaptation to temperature, 26
Oyster beds, fauna of, 239-266

Peat bogs, Gough Island, 356
Petty, R. O., article, 105-156
Phosphate, levels of, in aquaria, 168-172
Photosynthesis and respiration, *Oxyria digyna,* 5, 16-19

INDEX

Acer saccharinum, radial increment and flooding, 122
Age categories, in Desmognathus, 204-208
Agelaius, ecology of social systems, 285-312
Appalachian Mountains, salamander studies, 189-220
Arctic and alpine populations, *Oxyria digyna,* 1-29

Balanus balanoides
  competition in, 61-104
  mortality in, 69-83
  settlement by, 64-69
Billings, W. D., article, 1-29
Biomass, of soil arthropods, 224-225
Blackbird, ecology of social systems, 285-312
Breeding cycles, in Desmognathus, 208
Breeding, in blackbird populations, 289-292, 295-298

Chromosome number, *Oxyria digyna,* 11
Climate
  Gough Island, 339
  Indiana, 143-147
  S.E. Michigan, 34
Clutch size, in blackbirds, 294-295, 300-301
Colony size, limitation of, in blackbirds, 301-302
Community, old field, role of soil arthropods in, 221-238
Connell, J. H., article, 61-104
Continuum index and stream flooding susceptibility, 231
Controlled environment, effects, *Oxyria digyna*
  carbohydrate and nitrogen contents, 23
  dormancy, 16
  growth, 12
  phenology, 13
  inflorescence production, 16
Cooper, A. W., article, 31-59
Courtship
  in black-capped vireo, 323
  in Desmognathus, 197-200
Crowding effects, in barnacles, 75-82

Desmognathus, distribution, life history, and population dynamics, 189-220
Distribution
  black-capped vireo, 313-315
  of Desmognathus, in Virginia, 193-196
  of litter, on forest floor, 274-276
  of species, in oyster beds, 249-257

Egg laying, in Desmognathus, 202-204
Energetics, role of soil arthropods in, 221-238
Energy budgets, in blackbird populations, 302-306
Engelmann, M. D., article, 221-238
Environment, Indiana rivers
  and vegetation, 105-156
  soil properties, 111
  stream dynamics, 107
  watershed history, 106
Evolution, of blackbird social systems, 308-310
Evolutionary trends, in Desmognathus, 217-218

Fauna, of oyster beds, 239-266
Feeding behavior, in blackbirds, 294-295, 301
Feeding rate, in Thais, 89-91
Fern bush, Gough Island, 343
Flooding, effects of, 122-126
  damage, 123-125
  radial increment, 122
  seedlings, 123
Flood plain habitats, 113-122
Forest floor, habitat analysis of, 267-283

Geology, Gough Island, 339
Gough Island
  climate, 339
  geology, 339
  soils, 339
  topography, 339
  vascular flora, 366
  vegetation, 337-367
Graber, J. W., article, 313-336

Habitat analysis, of forest floor, 267-283
Habitat, black-capped vireo, 315-321
Heath, wet, Gough Island, 350
Heatwole, H., article, 267-283
Hurricanes, effects of, on oyster bed fauna, 253-255

Incubation, black-capped vireo, 325

Life forms and microclimate, 31-59
Life history
  of black-capped vireo, 322-333
  of Desmognathus, in Virginia, 196-204
Life tables, in Desmognathus, 215-216
Light, adaptation to, 25
Lindsey, A. A., article, 105-156
Litter, classification of, on forest floor, 267-283

Mating systems, in blackbirds, evolution of, 306-308
Michigan, southeastern, life-forms and microclimate, 31-59
Microclimate and life forms, 31-59
Microclimate, S.E. Michigan
  air temperature, 39
  evaporation, 43
  soil moisture, 46
  soil temperature, 44
  wind, 43
Migration, black-capped vireo, 333
Mooney, H. A., article, 1-29
Mortality, in barnacles, 69-83
Moorland, Gough Island, 353

Nesting, black-capped vireo, 331
Nesting success, in blackbirds, 294-295, 300-301

Orians, G. H., article, 285-312
Organ, J. A., article, 189-220
Oxygen consumption, by soil arthropods, 225-226
Oxyria digyna, physiological ecology of, 1-29
  arctic and alpine
    habitats, 5-8
    populations, 1-29
  germination, 11-12
  growth and development, 12-16
  rhizome formation, 25
Oxyria digyna, tolerance, 24
  adaptation to light, 25
  adaptation to temperature, 26
Oyster beds, fauna of, 239-266

Peat bogs, Gough Island, 356
Petty, R. O., article, 105-156
Phosphate, levels of, in aquaria, 168-172
Photosynthesis and respiration, *Oxyria digyna,* 5, 16-19

Physical factors, in oyster beds, 241-245
Physiological ecology, *Oxyria digyna*, 1-29
Population dynamics, of Desmognathus, in Virginia, 204-216
Popu'ation ecology, of barnacles, 61-104
Populations, of blackbirds, social systems in, 285-312
Populations, *Oxyria digyna*, 1-29
  morphological variability, 9-10
Predation, by Thais, 84-100

Radiophosphorus, movement of
  in aquaria, 158-178
  in outdoor pond, 178-182
Rate patterns, of P^{32} movement in aquaria, 182-184

Salinity factor, in relation to oyster bed fauna, 239-266
Seasonal changes
  in forest floor litter depth, 281
  in oyster bed fauna, 250-251
Settlement, of barnacles, 64-69
Social systems, in blackbirds, 285-312
Soil moisture, S.E. Michigan, 46
Soil temperature, S.E. Michigan, 44
Soils, Gough Island, 339
Species composition
  changes in, of oyster bed fauna, 249-251
  changes in, of soil arthropods, 228-229
Sterling, D. K., article, 105-156
Succession, seasonal, in oyster bed fauna, 250-251
Succession and zonation, flood plains, 113-121
Survivorship, in Desmognathus, 209-216

Temperature, adaptation to, 26
Temperature tolerance, *Oxyria digyna*, 24
Territory, blackbird populations, 292-294, 298-299
  black-capped vireo, 322
Thais lapillus, predation by, 84-100
Tippecanoe River, vegetation and environment, 105-156
Tolerance, to salinity, in oyster bed fauna, 257-260
Topography, effects of, on forest floor litter, 277-278
Tracer experiments, in aquaria, 157-186
Trophic efficiency, of soil arthropods, 229-232
Tussock grassland, Gough Island, 341

Van Asdall, W., article, 105-156
Vegetation, effects of, on forest floor litter, 277-278
Vegetation, along Wabash and Tippecanoe Rivers, 105-156
Vegetation, Gough Island, 337-367
  history, 359
  human influence, 360
  physiognomic affinities, 361
Vegetation, S.E. Michigan, 48
Vireo atricapilla, 313-336
  distribution, 313-315
  habitat, 315-321
  life history, 322-333
Vireo, black-capped, 313-336

Wabash River, vegetation and environment, 105-156
Wace, N. M., article, 337-367
Wells, H. W., article, 239-266
Whittaker, R. H., article, 157-188
Wind, S.E. Michigan, 43

Zonation and succession, along Indiana rivers, 113-121